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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,346	04/06/2001	Yoshishige Shimizu	7390/71285	2989
22242	7590	01/26/2004	EXAMINER	
FITCH EVEN TABIN AND FLANNERY 120 SOUTH LA SALLE STREET SUITE 1600 CHICAGO, IL 60603-3406			THOMPSON, CAMIE S	
			ART UNIT	PAPER NUMBER
			1774	

DATE MAILED: 01/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/827,346

Applicant(s)

SHIMIZU ET AL.

Examiner

Camie S Thompson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 11-13 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11-13 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other:

### DETAILED ACTION

1. Applicant's amendment and accompanying remarks filed November 4, 2003 have been acknowledged.
2. Examiner acknowledges amended claim 11.
3. Examiner acknowledges cancelled claims 9 and 14.
4. The objections to claims 3-4, 13 and 15 are withdrawn due to applicant's argument and cancelled claim 9.
5. The rejection of claims 1, 3-8, 11-13 and 15 under 35 U.S.C. 102(b) as being anticipated by Haley et al., U.S. Patent 5,393,812 is withdrawn due to applicant's argument.
6. The rejection of claims 11 and 13-14 under 35 U.S.C. 103(a) as being unpatentable over Haley et al., U.S. Patent Number 5,393,812 in view of Kuga et al., U.S. Patent Number 4,683,171 is withdrawn due to applicant's argument.

### *Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-8, 11-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haley et al., U.S. Patent Number 5,393,812.

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Haley discloses a flame retardant, light stable composition prepared from a polyolefin fiber or film, preferably polypropylene as per instant claims 1 and 11 (see abstract, column 1, lines 5-9 and column 15, lines 34-39). Also, the reference discloses a halogenated hydrocarbyl phosphate ester flame retardant is present in the amount of 0.5 percent and 0.01 to 3 percent of a functional hindered amine as per instant claims 1 and 11 (see column 12, lines 13-34). The reference also discloses that the hydrocarbyl phosphate can include an aromatic phosphate as per instant claims 5 and 12 (see column 6, lines 53-68). Haley discloses that the hindered amines are the alkoxyamine functional hindered amines light stabilizers known as NOR (see column 1, line 59-column 2, line 64). Additionally, the reference discloses that the R group in the NOR type hindered amine-based stabilizer can be a cycloalkyl as shown in column 3, line 55 as per instant claims 6 and 12. Column 12, lines 35-44 of the reference discloses that the UV light absorber can be present in the amount of 0.01 to 3 percent as per instant claim 7. It is also disclosed in the reference in column 4, lines 36-42 that the fiber can be a multifilament yarn as per instant claim 8. The strength of the fiber affects the flame retardancy of the fiber. Additionally, the strength of the fiber is an optimizable feature. Discovery of optimum value of a result effective variable involves only routine skill in the art in re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA). Therefore, it would have been obvious to one of ordinary skill in the art to have the strength of the polypropylene fiber of 4.0 cN/dtex or more in order to provide a flame retardant fiber that has a greater resistance to burning as per instant claim 2. The reference discloses in column 6, lines 17-29 that the polypropylene fiber can be bicomponent [core/sheath structure] and multiconstituent [multiple layers]. Haley also discloses that those of ordinary skill in the art can readily determine the proportions of the polymer fibers/films. The composition of the reference

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discloses at least one polyolefin, at least one flame retardant and at least one UV light stabilizer. Therefore, it would have been obvious to one of ordinary skill in the art to have a core/sheath construction where the core comprises a polypropylene resin containing the phosphoric ester based flame retardant and the NOR type hindered amine based stabilizer. and a sheath component comprises a polypropylene resin containing 0.3% by weight or less of the hindered amine-based stabilizer, and the total fiber contains 0.5% by weight or more of the phosphoric ester-based flame retardant and 0.4 by weight or more of the NOR type hindered amine-based stabilizer in order to obtain good flame retardancy and good resistance to UV degradation (see column 6, lines 17-20 and column 24, lines 23-29).

Claims 3-8, 13 and 15 are product by process claims. Even though product by process claims are limited and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. See MPEP 2113. Both the Haley reference and applicant recite a flame retarding polypropylene fiber. The process of measuring flame contact does not make the fiber a different product. Both applicant and Haley reference recite a flame retarding polypropylene fiber having a core-sheath structure, wherein a core component is a polypropylene resin containing a phosphoric ester-based flame retardant and a NOR-type hindered amine-based stabilizer, a sheath component is a polypropylene resin containing 0.3% by weight or less of the hindered amine-based stabilizer, and the total fiber contains 0.5% by weight or more of the phosphoric ester-based flame retardant and 0.4% by weight or mor of the NOR-type hindered amine based stabilizer.

*Response to Arguments*

9. Applicant's arguments filed November 4, 2003 have been fully considered but they are not persuasive. Applicant argues that Haley does not disclose or suggest are applied to a core component. The Haley reference discloses that a flame retardant composition comprises a polyolefin fiber and a phosphoric ester-based flame retardant and the NOR-type hindered amine-based stabilizer. Additionally, the Haley reference discloses that the polypropylene can have a bicomponent configuration that can be a core-sheath configuration. The Haley reference also discloses that those of ordinary skill in the art can readily determine the proportions of the polymer fibers. The Haley reference encompasses the flame retardant composition being applied to the core component as does applicant's claims. Also, applicant argues that the Haley reference does not suppress the odor characteristic of the HAL-based stabilizer. Applicant did not claim the suppression of odor.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (571) 272-1530. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (571) 272-1526. The fax phone numbers for the Group is (703) 872-9306.

*Cynthia H. Kelly*